

What is claimed is:

1. An implant for the spinal column, comprising:

a body positionable in a spinal disc space, said body including a leading end portion and an opposite proximal end, an upper surface orientable toward an endplate of an upper 5 vertebra and a lower surface orientable toward an endplate of a lower vertebra, said body having a height between said upper and lower surfaces corresponding to a desired disc space height between the upper vertebra endplate and the lower vertebra endplate, wherein said leading end portion is adapted for insertion into the disc space in a collapsed condition to restore the collapsed disc space to the desired disc space height as the body is inserted in the 10 collapsed disc space.

2. The implant of claim 1, wherein said body tapers from said height to a blunt nose portion at said leading end portion.

15 3. The implant of claim 1, wherein said body includes:

a first lateral surface extending between said upper surface and said lower surface; and

a second lateral surface opposite said first lateral surface and extending between said upper surface and said lower surface.

20 4. The implant of claim 3, wherein said body includes:

a first notch in said first lateral surface opening at said proximal end; and  
a second notch in said second lateral surface opening at said proximal end.

25 5. The implant of claim 1, wherein said body is made from bone material.

6. The implant of claim 1, wherein said body includes a first lateral section and a second lateral section attachable to said first lateral section.

30 7. The implant of claim 6, wherein one of said first and second lateral sections includes a receptacle extending laterally therethrough for receiving a coupling pin.

8. The implant of claim 7, wherein the other of said first and second lateral sections include said coupling pin extending from a medial surface thereof toward said receptacle of said one of said first and second lateral sections.

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9. The implant of claim 6, wherein said first lateral section includes a first medial surface and said second lateral section includes a second medial surface oriented toward said first medial surface, said first and second medial surfaces configured to interdigitate when positioned against one another.

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10. The implant of claim 9, wherein said each of said first and second medial surfaces includes a plurality of ridges extending between said upper and lower surfaces.

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11. The implant of claim 7, wherein said body includes:

a first lateral surface on said first lateral section extending between said upper surface and said lower surface; and

a second lateral surface on said second lateral section opposite said first lateral surface extending between said upper surface and said lower surface.

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12. The implant of claim 11, wherein said body includes:

a first notch in said first lateral surface opening at said proximal end; and

a second notch in said second lateral surface opening at said proximal end.

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13. The implant of claim 12, further comprising a coupling member having first and second portions positionable in respective ones of said first and second notches to secure said first and second lateral sections to one another.

14. The implant of claim 13, wherein said coupling member comprises a distal portion of an insertion instrument.

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15. The implant of claim 13, wherein said width of said coupling member is less than said width between said first and second lateral surfaces when said coupling member is engaged to first and second lateral sections, and said width of said coupling member is less than said width between said first and second lateral surfaces when said coupling member is 5 disengaged from said first and second lateral sections.

16. The implant of claim 7, wherein each of said first and second lateral sections is comprised of bone material cut longitudinally from a section of long bone material.

10 17. An implant insertable in a disc space between adjacent vertebrae, comprising:  
a body having a distal leading end portion sized for insertion into a non-distracted,  
collapsed disc space, said implant having a height between an upper surface and a lower surface  
thereof adapted to restore said non-distracted, collapsed disc space to a desired disc space height  
as said body is impacted into said non-distracted collapsed disc space, wherein said body is  
15 implantable in the restored disc space to post-operatively maintain said desired disc space  
height.

18. The implant of claim 17, wherein said upper and lower surfaces each include a plurality of ridges configured to engage an adjacent endplate of the vertebrae.

20 19. The implant of claim 17, wherein each of said upper and lower surfaces are convexly curved.

25 20. An implant insertable in a disc space between an upper vertebra and a lower  
vertebra, said implant comprising:  
a body including a distal leading end portion, a proximal end, an upper surface  
orientable toward an endplate of the upper vertebra and a lower surface orientable toward an  
endplate of the lower vertebra;  
said body including a first height between said upper and lower surfaces  
30 corresponding to a desired disc space height; and

said body including a distal leading end portion configured for insertion into a non-distracted collapsed disc space, wherein said body is implantable in the non-distracted, collapsed disc space to post-operatively maintain the disc space at the desired disc space height; wherein said body is selected to correspond in size and shape to a trial instrument  
5    body previously inserted in the non-distracted, collapsed disc space and determined to provide the desired disc space height.

21.    A kit, comprising:

at least two implants, each of said at least two implants adapted for insertion in a  
10    collapsed disc space between an upper vertebra and a lower vertebra to provide a differing restored disc space height, a selected one of said at least two implants implantable in the collapsed disc space to post-operatively maintain the disc space at a desired disc space height corresponding to the restored disc space height provided by the selected implant.

15    22.    The kit of claim 21, wherein each of said at least two implants comprises:

a body including a distal leading end portion, a proximal end, an upper surface orientable toward an endplate of the upper vertebra and a lower surface orientable toward an endplate of the lower vertebra, said body including a first height between said upper and lower surfaces corresponding to the restored disc space height.

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23.    The kit of claim 22, wherein said upper surface and said lower surface of each of at least two said implants are convex.

24.    The kit of claim 22, further comprising:

25    at least two trial bodies, each of said at least two trial bodies adapted for insertion in a collapsed disc space between an upper vertebra and a lower vertebra to provide a differing restored disc space height, said selected one of said at least two implants corresponding in size and shape to said trial body providing the restored disc space height corresponding to the desired disc space height.

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25. The kit of claim 24, wherein said at least two implants are comprised of bone material.

26. The kit of claim 21, further comprising at least one insertion instrument  
5 releasably attachable to each of said at least two implants.

27. The kit of claim 21, wherein each of said at least two implants has a height at a leading end nose portion thereof that is the same for each of said at least two implants.

10 28. The kit of claim 27, wherein:  
said restored disc space height of each of said at least two implants is defined between  
an upper surface and a lower surface thereof; and  
each of said at least two implants includes an upper transition surface extending from  
said nose portion thereof to said upper surface and a lower transition surface extending from  
15 said nose portion thereof to said lower surface.

29. The kit of claim 21, where said at least two implants comprises three or more implants, each of said implants including a leading end nose portion with a first height, said first height of each of said three or more implants being the same, each of said three or more  
20 implants further including a second height between an upper surface and a lower surface thereof corresponding to the restored disc space height, said second height being different for each of said three or more implants.

30. The kit of claim 29, wherein each of said three or more implants is  
25 implantable in the collapsed disc space to post-operatively maintain the collapsed disc space at the restored disc space height provided thereby.

31. The kit of claim 29, wherein said first height is in the range from about 3 millimeters to about 4 millimeters and said differing second heights are included in the range  
30 from about 6 millimeters to about 15 millimeters.

32. The kit of claim 29, wherein said first height is in the range from about 3 millimeters to about 4 millimeters and said differing second heights are included in the range from about 12 millimeters to about 15 millimeters.

5 33. A kit comprising:

at least one trial instruments including a trial body with a leading end portion sized for insertion into a collapsed disc space, said trial body including a first height proximal a leading end portion thereof for restoring the collapsed disc space height to a restored disc space height; and

10 two or more implants each including a leading end portion and a second height proximal the leading end portion thereof, said second height of each of said two or more implants differing from the other of said two or more implants, said leading end portion of each of said two or more implants including a nose portion adapted for insertion in a non-distracted disc space.

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34. The kit of claim 33, where said nose portion of each of said two or more implants has a third height, said third height being the same for each of said two or more implants.

20 35. The kit of claim 34, wherein said third height is in the range from about 3 to 4 millimeters.

25 36. The kit of claim 34, wherein each of said two or more implants has an upper transition surface and a lower transition surface along said leading end portion tapering from said second height thereof to said third height at said nose portion thereof.

30 37. The kit of claim 34, wherein said at least one trial instrument includes two or more trial instruments each having a trial body with a different first height, wherein said leading end portion of each of said trial bodies of said two or more trial instruments includes a nose portion having a fourth height, said fourth height being the same for each of said trial bodies.

38. The kit of claim 37, wherein said fourth height is substantially the same as said third height.

5 39. The kit of claim 38, wherein said third height and said fourth height are each in the range from about 3 to 4 millimeters.

10 40. The kit of claim 38, wherein each of said trial bodies of said two or more trial instruments includes an upper transition surface and a lower transition surface along said leading end portion tapering from said first height thereof to said fourth third height at said nose portion thereof.

41. A kit, comprising:

15 a set of trial instruments, at least two of said trial instruments of said set having a trial body at a distal end thereof, each of said trial bodies having a leading end portion adapted for insertion in a collapsed spinal disc space and being insertable into the collapsed spinal disc space to provide a restored disc space height; and

20 a set of implants positionable in the spinal disc space, each of said implants including a body sized and shaped to correspond in size and shape to a respective one of said trial bodies of said trial instruments, each of said bodies having a leading end portion adapted for insertion in a collapsed spinal disc space, wherein a desired one of said set of implants is selected for insertion into the spinal disc space upon an indication to the surgeon of a desired fit in the spinal disc space provided by the respective trial body.

25 42. An implant insertion assembly, comprising:

an intervertebral implant having upper and lower surface and opposite lateral surfaces extending between said upper and lower surface, each of said lateral surfaces having a notch formed therein opening at a proximal end of said implant; and

30 an insertion instrument including a distal coupling portion engageable in said notches of each of said opposite lateral surfaces of said implant, said coupling portion including a first position engaging said implant in said notches and a second position disengaged from said

implant, wherein a width of said coupling member in each of the first and second positions is less than a width of said implant between said lateral surfaces.

43. The assembly of claim 42, wherein said implant includes first and second lateral  
5 sections positionable adjacent one another, one of said lateral surfaces extending along said first lateral section and the other of said lateral surfaces extending along said second lateral section.

44. A method for inserting an intervertebral implant, comprising:  
accessing a collapsed spinal disc space;

10 sequentially inserting and removing a number of implants into the collapsed spinal disc space, each of said implants providing a different restored disc space height when inserted in the disc space, the spinal disc space at least partially collapsing when the inserted implant is removed therefrom; and

leaving in the spinal disc space the implant from the number of implants providing a  
15 restored disc space height corresponding to a desired disc space height to post-operatively maintain the desired disc space height.

45. The method of claim 44, wherein each implant of the number of implants has a leading end portion with a nose portion having the same height for each of the number of  
20 implants.

46. The method of claim 44, wherein said height of said nose portions is about 3 to 4 millimeters.

25 47. A method for inserting an intervertebral implant, comprising:  
accessing a collapsed spinal disc space from an uni-portal approach;  
inserting a first implant through the portal into the spinal disc space to provide a restored disc space height;  
determining if the restored disc space height corresponds to a desired disc space height;  
30 if the restored disc space height does not correspond to a desired disc space height:

removing the inserted implant from the spinal disc space through the portal such that the spinal disc space is non-distracted;

selecting a second implant providing a different restored disc space height for insertion into the non-distracted spinal disc space through the portal to provide a second restored disc space height; and

if the restored disc space height corresponds to the desired disc space height, leaving the inserted implant in the spinal disc space to post-operatively maintain the desired disc space height.

- 10        48. A method for inserting an intervertebral implant, comprising:
- accessing a collapsed spinal disc space;
- sequentially inserting and removing a number of trial bodies into the collapsed spinal disc space;
- selecting the trial body providing a desired disc space height;
- 15        selecting an intervertebral implant having a height corresponding to the desired disc space height provided by the selected trial body;
- removing the selected trial body such that the spinal disc space is non-distracted; and
- distracting the spinal disc space with the selected intervertebral implant to restore the collapsed spinal disc space to the desired disc space height and post-operatively maintain the
- 20        desired disc space height.

49. The method of claim 48, wherein the collapsed spinal disc space is accessed from a uni-portal approach.